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Dated: January 14, 2004

Signature: 

(Mary Jane DiPalma)

Docket No.: CIBT-P02-092  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Lang et al.

Application No.: Not Yet Assigned

Confirmation No.:

Filed: January 14, 2004

Art Unit: Not Yet Assigned

For: ACTIVE MODIFIED HEDGEHOG  
PROTEINS

Examiner: Not Yet Assigned

**INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement accompanies the new patent application submitted herewith.

All of the patent(s) or publication(s) in the attached form PTO/SB/08 are not supplied because they were previously cited by or submitted to the Office in a prior application number 09/198,975, filed November 24, 1998 and relied upon in this application for an earlier filing date under 35 U.S.C. 120.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this


Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 18-1945, under Order No. CIBT-P02-092. A duplicate copy of this paper is enclosed.

Dated: January 14, 2004

Respectfully submitted,

By 

David P. Halstead, Ph.D.

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Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	Not Yet Assigned
				Filing Date	January 14, 2004
				First Named Inventor	Kurt Lang
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	1	of	2	Attorney Docket Number	CIBT-P02-092

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA**	US-5,364,839	11-15-1994	Gerhart et al.	
	AB**	US-6,444,793	09-03-2002	Pepinsky	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	BA**	WO-97/35607	10-02-1997			
	BB**	WO-95/16035	06-15-1995			
	BC**	WO-93/00050	01-07-1993			
	BD**	WO-98/02454	01-22-1998			
	BE**	WO-96/16668	06-06-1996			
	BF**	WO-98/30576	07-16-1998			

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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CA**	Asahina et al., "Human osteogenic protein-1 induces chondroblastic, osteoblastic, and/or adipocytic differentiation of clonal murine target cells," Exp. Cell. Res. 222:38-47 (1996)	
	CB**	Bitgood et al., "Sertoli cell signaling by Desert hedgehog regulates the male germline," Curr. Biol. :298-304 (1996)	
	CC**	Bumcrot et al., "Proteolytic processing yields two secreted forms of sonic hedgehog," Mol. Cell. Biol. 15(4):2294-2303 (1995)	
	CD**	Cha et al., "Rhodopsin kinase: Expression in baculovirus-infected insect cells, and characterization of post-translational modifications," Proc. Natl. Acad. Sci USA 94:10577-10582 (1997)	
	CE**	Chiang et al., "Cyclopia and defective axial patterning in mice lacking Sonic hedgehog gene function," Nature 383:407-413 (1996)	
	CF**	Fietz et al., "The hedgehog gene family in Drosophila and vertebrate development," Development Supplement pages 43-51 (1994)	
	CG**	Hammerschmidt, "The world according to Hedgehog," TIG 13(1):14-21 (1997)	
	CH**	Hynes et al., "Induction of midbrain dopaminergic neurons by Sonic Hedgehog," Neuron, 15:35-44 (1995)	
	CI**	Karaplis et al., "Lethal skeletal dysplasia from targeted disruption of the parathyroid hormone-related peptide gene," Genes Dev. 8:227-289 (1994)	
	CJ**	Kinto et al., "Fibroblasts expressing Sonic Hedgehog induce osteoblast differentiation and ectopic bone formation," FEBS Letters 404:319-323 (1997)	
	CK**	Lai et al., "Patterning of the neural ectoderm of Xenopus laevis by the amino-terminal product	

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Sheet	2	of	2	Attorney Docket Number	CIBT-P02-092

		of hedgehog autoproteolytic cleavage," Development 121:2349 (1995)	
	CL**	Miao et al., "Sonic Hedgehog promotes the survival of specific CNS neuron populations and protects these cells from toxic insult in vitro," The Journal of Neuroscience 17(15):5891-5899 (1997)	
	CM**	Nakamura et al., "Induction of osteogenic differentiation by Hedgehog proteins," Biochemical and Biophysical Research Communications 237:465-469 (1997)	
	CN**	Pepinsky et al., "Identification of a palmitic acid-modified form of human Sonic Hedgehog," The Journal of Biological Chemistry 273:14037-14045 (1998)	
	CO**	Perrimon, "Hedgehog and beyond," Cell 80:517-520 (1995)	
	CP**	Porter et al., "Cholesterol modification of Hedgehog signaling proteins in animal development," Science 274:255-259 (1996)	
	CQ**	Seytter et al., "Hydrophobic modifications at the amino-terminal cysteine of recombinant Sonic Hedgehog signaling domain dramatically increase activity," Bone 23:S563, Abstract (1998)	
	CR**	Smith, "Hedgehog the floor plate, and the zone of polarizing activity," Cell 76:193-196 (1994)	
	CS**	Vortkamp et al., "Regulation of rate of cartilage differentiation by Indian hedgehog and PTH-related protein," Science 273:613-622 (1996)	
	CT**	Wozney et al., "Bone morphogenetic proteins and their gene expression," Cellular and Molecular Biology of Bone, New York Academic Press, pp. 131-167 (1993)	

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<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

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